

INDEX TO VOLUME XL

- A**BSORPTION, intestinal, effect of pancreatic juice on, 145.
Adrenalin, action of minimal doses of, 130.
—, content of the blood in "shock," 130.
Adrenals, influence of on kidney, 127.
Age, effect upon muscular work, 132.
—, influence upon venous blood pressure, 43.
Alcohol, utilization of as nutriment, 143.
Altitude, effect upon circulation in man, 380.
ALVAREZ, W. C. IV. Differences in rhythmicity and tone in different parts of the wall of the stomach, 585.
American Physiological Society, proceedings, 126.
Amphibia, gastric hunger contractions in, 140.
Anaesthesia, effect of on afferent impulses in brain stem, 148.
—, effect of on electrical activity of nerve, 503.
Antibodies, of lymph, 366.
ARKIN, A. The influence of chemical substances on immune reactions with special reference to oxidation, 148.
ATWOOD, W. G. See MEIGS and ATWOOD, 30.
AUER, J. The action of the depressor nerve on the pupil, 143.
Auricle, contraction of in heart block, 267.
—, fibrillation of, in heart block, 267.
—, movements of mitral valves in relation to systole of, 134.
—, physiology of, 218.
—, physiology of muscle of, 138.
—, time relations of systole of, 133.
- B**ECHT, F. C. and A. B. LUCKHARDT. The origin of the antibodies of the lymph, 366.
BEFORE, E. A. and H. C. JACKSON. Adrenalin content of the blood in conditions of low blood pressure and "shock," 130.
BEIFELD, A. F., H. WHEELON and C. R. LOVELETTE. The influence of hypotensive gland extracts on vaso-motor irritability, 360.
BELL, R. D. See FOLIN, BELL and FOSTER, 126.
Bile pigment metabolism, 332, 349.
— output, 332, 349.
BILLINGSLEY, P. R. See RANSON and BILLINGSLEY, 571.
BLACKBURN, C. D. See PETERS and BLACKBURN, 137.
Blood, changes following hemorrhage and perfusion, 136.
—, coagulation of as affected by metals and electrical current, 186.
—, coagulation of following thyro-parathyroidectomy, 148.
—, fat of, in relation to fat feeding and fasting, 146.
—, fat of, in relation to heat production, etc., 146.
—, lipase, of in relation to fat feeding and fasting, 146.
—, pressure, arterial, effect of physical exertion on at high altitudes, 380.
—, —, arterial, physical mechanisms concerned in clinical estimation of, 49.
—, —, arterial, respiratory changes in, 554.
—, —, estimation of by indirect methods, 82.

- Blood pressure, in mental defectives, 137.
 ——, low, adrenal content of blood in, 130.
 ——, mechanism of arterial sounds of Korotkoff, 136.
 ——, mechanism of compression sounds of Korotkoff, 82.
 ——, physical mechanisms concerned in clinical determination of, 135.
 ——, restoration of after haemorrhage, 522.
 ——, studies of in Valsalva experiments, 139.
 ——, venous, effect of physical exertion on at high altitudes, 380.
 ——, venous, influence of age upon in man, 43.
 —— sugar, effect of temperature and humidity on, 486.
 ——, uric acid content of, 126.
 ——, venous, tension of carbon dioxide and oxygen in, 134, 547.
 Bone marrow, perfusion of, 514.
 ——, vasomotor nerves of, 514.
BOOTHBY, W. M. and I. SANDIFORD. The tension of carbon dioxide and oxygen in the venous blood at rest and at work, 134.
 ——. The tension of carbon dioxide and the percentage saturation of the haemoglobin in the venous blood at rest and at work. The regulation of the circulation rate, 547.
BROOKS, C. and A. B. LUCKHARDT. The chief physical mechanisms concerned in clinical methods of measuring blood pressure, 49, 135.
BURGE, W. E. The destruction of hormones, pro-enzymes, and enzymes by ultra-violet radiation, 137.
 ——, W. R. FISCHER and A. J. NEILL. The destruction of hormones, pro-enzymes and enzymes by ultra-violet radiation, 426.
BURTON-OPITZ, R. Haemodynamical studies, 136.
 ——. The character of the innervation of the kidney, 437.
CANCER, in mice, 127.
 —— immunity, effect of X-rays on, 128.
CANNON, W. B. and M. CATTELL. Some results of studies on electrical changes in glands, 143.
 —— and R. FITZ. Further observations on over-activity of the cervical sympathetic, 126.
 Carbon dioxide, tension of in venous blood, 134, 547.
 Cardiodynamics, in heart block, 267.
 Castration, effect of on glands of internal secretion, 153.
CATTELL, M. See CANNON and CATELL, 143.
 Central nervous system, chemical changes in following pellagra, 144.
 Cerebro-spinal fluid, presence of posterior lobe secretion in, 128.
CHELEY, G. See SCHNEIDER, CHELEY and SISCO, 380.
 Chromophil tissue, physiological action of, 21.
 Chromotropic action of vagus, relation of to nodal tissues, 134.
 Circulation, of blood at high altitudes, 380.
CLOWES, G. H. A. On the rôle played by electrolytes in determining the permeability of protoplasm, 132.
 Coagulation. See blood.
COBLENTZ, R. G. See FOLEY, COBLENTZ and SNYDER, 554.
COLVIN, W. P. See LEE, SCOTT AND COLVIN, 474.
CUNNINGHAM, R. S. See SHIPLEY and CUNNINGHAM, 75.
CUSHING, H. and G. HORRAX. The presence of posterior lobe secretion in the cerebro-spinal fluid, 128.

- D**AVIS, D. M. See MARSHALL and DAVIS, 127.
- DAWSON, P. M. and P. C. HODGES. Lifting and the Valsalva experiment: effect on systolic pressure, heart rate and radial pulse curve in man. With a note on labor pains in a rabbit, 139.
- DEAN, A. L. The movements of the mitral valves in relation to auricular and ventricular systoles, 134.
- , Jr., A. L. The movements of the mitral cusps in relation to the cardiac cycle, 206.
- Dementia praecox, salivary factor in, 1.
- Depressor nerve, action of on pupil, 143.
- Diaphragm muscle, physiological properties of, 446.
- Diet, effect of on bile pigment output, 332, 349.
- , vegetable, chemical changes in central nervous system following, 144.
- DOWNS, A. W. Blood pressure in haemorrhage and its restoration, 522.
- DRINKER, C. K. and K. R. DRINKER. A method for maintaining an artificial circulation through the tibia of the dog, with a demonstration of the vasomotor control of the marrow vessels, 514.
- , K. R. See DRINKER and DRINKER, 514.
- Duodenal, regurgitation from, 141.
- E**LECTRIC current, effect of on coagulation of blood, 186.
- Electrocardiogram, in normal infants, 133.
- Electrolytes, effect on permeability of protoplasm, 132.
- Enzymes, destruction of by ultra-violet radiation, 137, 426.
- Epilepsy, salivary factor in, 1.
- ERLANGER, J. A note on the contractility of the musculature of the auriculo-ventricular valves, 150.
- . Studies in blood pressure estimation by indirect methods, II. The mechanism of the compression sounds of Korotkoff, 82.
- EYSTER, J. A. E. See STEENBOCK, EYSTER and MEEK, 134.
- F**ALLING reflex, of cats, 373.
- Fasting, effect of on composition of body of lobsters, 150.
- , effect of on fat and lipase of blood, 146.
- Fat, effect of feeding on fat and lipase of blood, 146.
- FAWCETT, G. G. See ROGERS, RAHE, FAWCETT and HACKETT, 12.
- Feeding experiments on rat, 147.
- FERRY, E. L. See OSBORNE, MENDEL, FERRY and WAKEMAN, 16.
- Fibrin gel, formation and structure of, 126, 526.
- FISCHER, W. R. See BURGE, FISCHER and NEILL, 426.
- FITZ, R. See CANNON and FITZ, 126.
- FOLEY, F. E. B., R. G. COBLENTZ and C. D. SNYDER. On the determination of character and quantity of the respiratory change of arterial pressure in man by means of the Korotkoff sounds, 554.
- FOLIN, O., R. D. BELL and G. LE B. FOSTER. Some new observations on the uric acid content of the blood, 126.
- Food accessories, 126.
- FORBES, A. and R. H. MULLER. Detection with the string galvanometer of afferent impulses in the brain stem and their abolition with ether anaesthesia, 148.
- , R. MCINTOSH and W. SEFTON. The effect of ether anaesthesia on the electrical activity of nerve, 503.

- FOSTER, G. LE B. See FOLIN, BELL AND FOSTER, 126.
- FOWLER, C. C., M. E. REHFUSS and P. B. HAWK. The influence of certain cereal foods on the gastric secretion, 150.
- FULK, M. E. and J. J. R. MACLEOD. Evidence that the active principle of the retroperitoneal chromaphil tissue has the same physiological action as the active principle of the suprarenal glands, 21.
- — —. The distribution of suprarenin-yielding tissue in different animals, 130.
- G**ALVANOMETER, string, protection of, 230.
- Gastrectomy, influence of subsequent pancreatectomy in dogs, 128.
- GESELL, R. A. Cardiodynamics in heart block as affected by auricular systole, auricular fibrillation and stimulation of the vagus nerve, 267.
- — —. Initial length, initial tension and tone of auricular muscle in relation to myo- and cardiodynamics, 138.
- Glands, electrical changes in, 143.
- Glycosuria, phlorhizien, appearance of sugar in digestive secretions in, 142.
- GREENE, C. W. and W. S. SUMMERS. The fat and lipase content in the blood in relation to fat feeding and fasting, 146.
- Growth, acceleration of after retardation, 16.
- GRUBER, C. M. The responses of the vasomotor mechanism to different rates of stimulation, 136.
- GUENTHER, A. E. See LEE, GUENTHER and MELENEY, 132, 446.
- H**ACKETT, G. S. See ROGERS, RAHE, FAWCETT and HACKETT, 12.
- Haemodynamic studies, 136.
- HARDT, L. L. J. Contributions to the physiology of the stomach. XXXIII.
- The secretion of gastric juice in cases of gastric and duodenal ulcers, 314.
- HAWK, P. B. See FOWLER, REHFUSS and HAWK, 150.
- — —. See MILLER, REHFUSS and HAWK, 151.
- — —. See SPENCER, MEYER, REHFUSS and HAWK, 141.
- Heart, effect of action current of on phrenic nerve, 433.
- — — block, cardiodynamics of, 267.
- Heat production, relation of to fat of blood, 146.
- Hemorrhage, effect of on blood, 136.
- HIGGINS, H. L. The rapidity with which alcohol and some sugars are available as nutriment, 143.
- HODGES, P. C. See DAWSON and HODGES, 139.
- HOOKER, D. R. The influence of age upon the venous blood pressure in man, 43.
- HOOPER, C. W. See WHIPPLE and HOOPER, 349.
- — — and G. H. WHIPPLE. Bile pigment metabolism. I. Bile pigment output and diet studies, 332.
- Hormones, destruction of by ultraviolet radiation, 137, 426.
- HORRAX, G. See CUSHING and HORRAX, 128.
- HOSKINS, A. D. See HOSKINS and HOSKINS, 130.
- — —, R. G. and A. D. HOSKINS. The effects of suprarenal feeding on the white rat, 130.
- HOUGH, T. and J. A. WADDELL. Blood changes following hemorrhage and perfusion, 136.
- HOWELL, W. H. Structure of the fibrin-gel and theories of gel-formation, 526.
- — —. The formation and structure of the fibrin-gel, 126.
- Humidity, effect of on working power of muscle and sugar of blood, 486.

- HYMAN, L. H. On the action of certain substances on oxygen consumption. I. The action of potassium cyanide, 238.
- Hypotonic sea-water, effect of on dividing sea-urchin eggs, 130.
- I**MMUNE reactions, effect of chemical substances on, 148.
- Infants, electrocardiogram in, 133.
- Insufflation, through humerus in fowls, 126.
- Intestine, effect of pituitary extracts on, 150.
- Intravenous injections, 137.
- JACKSON, H. C. See BEDFORD and JACKSON, 130.
- KIDNEY, function of when deprived of nerves, 133.
- , influence of adrenals on, 127.
- , innervation of, 437.
- KNOWLTON, F. P. The diuretic action of tissue extracts, 142.
- KOCK, M. L. and C. VOEGTLIN. Comparison of the chemical changes in the central nervous system in pellagra and in animals on an exclusive vegetable diet, 144.
- KRUMBHAAR, E. B. Electrocardiographic studies in normal infants, 133.
- L**ECITHIN-GLUCOSE preparation, 145.
- LEE, F. S., E. L. SCOTT and W. P. COLVIN. Some of the chemical properties of certain mammalian muscles, 474.
- , The action of temperature and humidity on the working power of muscles and on the sugar of the blood, 486.
- , A. E. GUENTHER and H. E. MELENEY. Some of the general physiological properties of diaphragm muscle as compared with certain other mammalian muscles, 446.
- LEE, F. S., A. E. GUENTHER and H. E. MELENEY. The relation of certain muscles to oxygen, 132.
- LILLIE, R. S. Increase of permeability to water following normal and artificial activation in sea-urchin eggs, 249.
- . Mass-action in the activation effect of butyric acid on unfertilized star-fish eggs, 131.
- . Rhythmic changes in the resistance of dividing sea-urchin eggs to hypotonic sea-water, 130.
- LIVINGSTON, A. E. The effect of castration on the weight of the pituitary body and other glands of internal secretion in the rabbit, 153.
- Lobster, effect of fasting on composition of, 150.
- LOER, J. Experiments on the mechanism of osmosis, 126.
- , L. Heredity and internal secretion in the origin of cancer in mice, 127.
- LOMBARD, W. P. Influences affecting voluntary muscular work—especially age and tobacco, 132.
- LOVELETTE, C. R. See BEIFELD, WHEELON and LOVELETTE, 360.
- LOVETT, R. W. See MARTIN and LOVETT, 144.
- LUCKHARDT, A. B. See BECHT and LUCKHARDT, 366.
- , See BROOKS and LUCKHARDT, 49, 135.
- Lymph, antibodies of, 366.
- MACLEOD, J. J. R. See FULL and MACLEOD, 21, 130.
- MCCOLLUM, E. V. Food accessories, 126.
- MCINTOSH, R. See FORBES, MCINTOSH and SEFTON, 503.
- MARSHALL, E. K. and D. M. DAVIS. The influence of adrenals on the kidneys, 127.

- MARSHALL, J. A. The salivary factor and its relation to dental caries and immunity in dementia praecox and epilepsy, 1.
- MARTIN, E. G and R. W. LOVETT. The voluntary innervation of skeletal muscle, 144.
- , and P. G. STILES. Vasomotor summations, 136, 194.
- Mass-action, in activation of unfertilized star-fish eggs, 131.
- MEEK, W. J. See STEENBOCK, EYSTER and MEEK, 134.
- . The action of minimal doses of adrenalin, 130.
- MEIGS, E. B. and W. G. ATWOOD. The reactions of striated muscle to potassium chloride solutions, 30.
- MELENEY, H. E. See LEE, GUENTHER and MELENEY, 132, 446.
- MELTZER, S. J. See MEYER and MELTZER, 126.
- MENDEL, L. B. See OSBORNE and MENDEL, 126, 147.
- . See OSBORNE MENDEL, FERRY and WAKEMAN, 16.
- Mental defectives, experimental and clinical studies of, 137.
- Metals, effect of on coagulation of blood, 186.
- Metaphore, a disguised type of smooth muscle in, 144.
- MEYER, A. L. and S. J. MELTZER. On continuous insufflation through the humerus in fowls, 126.
- , G. P. See SPENCER, MEYER, REHFUSS and HAWK, 141.
- MILLER, F. R. Localization by faradic stimulation in the floor of the fourth ventricle, 141.
- , R. H. See FORBES and MILLER, 148.
- , R. J., M. E. REHFUSS, and P. B. HAWK. The psychic secretion of gastric juice, 151.
- Mitral valves, movements of, 134.
- MORGULIS, S. Changes in the composition of the body of fasting lobsters, 150.
- MULLER, H. R. and L. H. WEED. Notes on the falling reflex of cats, 373.
- MURLIN, J. R. and J. A. RICHE. The fat of the blood in relation to heat production, narcosis and muscular work, 146.
- and J. E. SWEET. The influence of gastrectomy on subsequent pancreatectomy in dogs, 128.
- MURPHY, J. B. The effect of X-rays on cancer immunity, 128.
- Muscle, effect of oxygen on, 132.
- , effect of temperature and humidity on working power of, 486.
- , of stomach, rhythmicity and tone in, 585.
- , mammalian, chemical properties of, 474.
- , —, diaphragm, physiological properties of, 446.
- , skeletal, voluntary innervation of, 144.
- , smooth muscle nerve preparation, 150.
- , —, of metaphore, 144.
- , —, relation of to heat production, 138.
- , striated, reaction of to potassium chloride, 30.
- Muscular response, in sea-anemones, 132.
- work, effect of age upon, 132.
- —, effect of tobacco upon, 132.
- —, influences affecting, 132.
- —, relation of to fat of blood, 146.
- Musculature, of auriculo-ventricular valve, 150.
- NARCOSIS, relation of to fat of blood, 146.
- NEILL, A. J. See BURGE, FISCHER and NEILL, 426.
- Nerve, depressor, action of on pupil, 143.
- , effect of anaesthesia on, 503.
- Nerves, spinal conduction of pain in, 571.

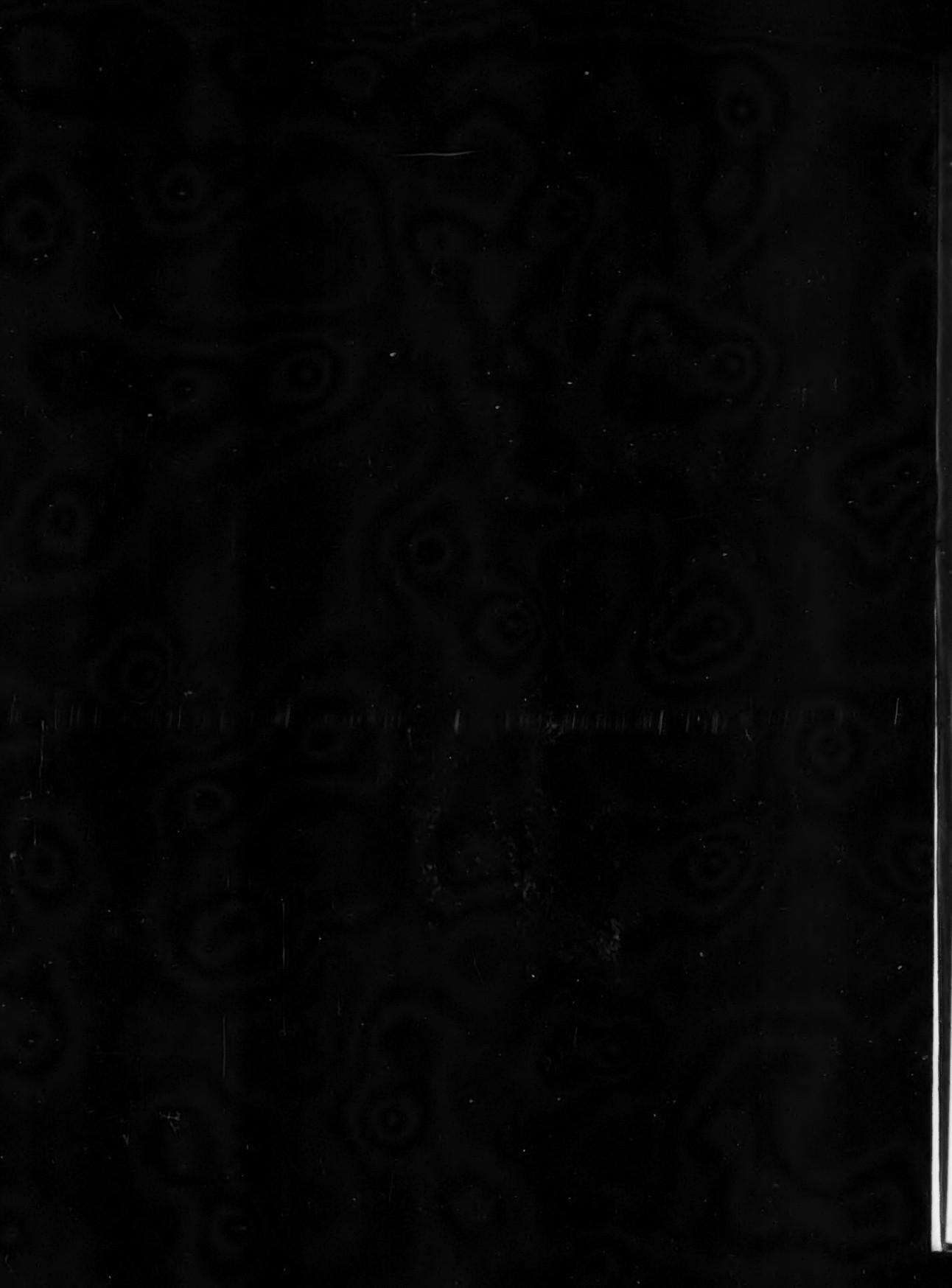
- Nervous system, lesions of, 150.
—, —, sympathetic, over-activity of, 126.
Nodal tissue, relation of to chromotropic action of vagus, 134.
- O**MENTUM, as factor in absorption from peritoneal cavity, 75.
- Organ extracts, diuretic action of, 142.
—, —, effect of on vasomotor irritability, 360.
—, —, effect upon pancreatic secretion, 12.
- OSBORNE, T. B. and L. B. MENDEL. Food accessories, 126.
- , —. Some practical applications of feeding experiments with albino rats, 147.
- , —, E. L. FERRY and A. J. WAKEMAN. Acceleration of growth after retardation, 16.
- Osmosis, experiments on mechanism of, 126.
- OSTERHOUT, W. J. V. The permeability of animal and plant cells, 132.
- Oxidation, influence of on immune reactions, 148.
- Oxygen, relation of to certain muscles, 132.
—, tension of in venous blood, 134, 547.
— consumption, effect of potassium cyanide on, 238.
- P**ANCREACTECTOMY, effect of previous gastrectomy upon, 128.
- Pancreatic juice, effect of excluding on intestinal absorption, 145.
— secretion, effect of organ extracts upon, 12.
- PARKER, G. H. Three types of muscular response in sea-anemones, 132.
- PATTERSON, T. L. Comparative studies in the physiology of the gastric hunger contractions in the amphibia and the reptilia, 140.
- PEARCE, R. G. The appearance of sugar in the digestive secretions of phlorhizin glycosuria, 142.
- PEARCE, R. G. The appearance of sugar in the secretions of the digestive tract following the administration of phlorhizin, 418.
- Pellagra, effect of on chemical changes in central nervous system, 144.
- Perfusion, of bone marrow, 514.
- Peritoneal cavity, absorption from, 75.
- Permeability, in sea-urchin eggs, 249.
—, of animal and plant cells, 132.
—, of protoplasm, effect of electrolytes on, 132.
- PETERS, A. W. and C. D. BLACKBURN. Experimental and clinical studies on mental defectives. III. The relation of systolic and diastolic blood pressures and their power of adjustment to body position, 137.
- Phlorhizin, effect on appearance of sugar in secretions, 418.
- Phrenic nerve, excitation of by action current of heart, 433.
- PIKE, F. H. A note on the excitation of the phrenic nerve by the action current of the heart, 433.
- . Cinematograph and lantern demonstration of some effects on lesions of the nervous system, 150.
- Pituitary, effect of castration on weight of, 153.
- , effect of extracts of on isolated intestine, 150.
- , secretion of by stimulation of superior cervical ganglion, 150.
- Potassium chloride, effect of on striated muscle, 30.
— cyanide, effect of on oxygen consumption, 238.
- PRATT, J. H. Effect of excluding pancreatic juice from the intestine on the absorption of nitrogen and fat, 145.
- Proceedings, of American Physiological Society, 126.
- Pro-enzymes, destruction of by ultraviolet radiation, 137, 426.
- Pulse rate, effect of physical exertion on at high altitudes, 380.

- Pupil, action of depressor nerve, on, 143.
- QUINBY, W. C.** The function of the kidney when deprived of its nerves, 133.
- RAHE, J. M.** See ROGERS, RAHE, FAWCETT and HACKETT, 12.
- RANSON, S. W.** and P. R. BILLINGSLEY. The conduction of painful afferent impulses in the spinal nerves. Studies in vasmotor reflex arcs, 11, 571.
- RASMUSSEN, A. T.** See SIMPSON and RASMUSSEN, 148.
- RAT**, effect of suprarenal feeding on, 130.
—, practical applications of feeding experiments on, 147.
- Reflex, falling, of cats, 373.
- Reflexes, vasmotor, 571.
- REHFUSS, M. E.** See FOWLER, REHFUSS and HAWK, 150.
—. See MILLER, REHFUSS and HAWK, 151.
—. See SPENCER, MEYER, REHFUSS and HAWK, 141.
- Reptilia, gastric hunger contractions in, 140.
- Respiration, artificial, through humerus, in fowls, 126.
—, effect of on arterial blood pressure, 554.
- RICHE, J. A.** See MURLIN and RICHE, 146.
- ROGERS, J., J. M. RAHE, G. G. FAWCETT and G. S. HACKETT.** The effects of the subcutaneous injection of organ extracts upon the flow of pancreatic secretion, 12.
- SALIVARY factor**, in dementia praecox and epilepsy, 1.
—, its relation to dental caries and immunity, 1.
- SANDIFORD, I.** See BOOTHBY and SANDIFORD, 134, 547.
- SCHNEIDER, E. C., G. E. CHELEY and D. L. SISCO.** The circulation of the blood in man at high altitudes. III. The effects of physical exertion on the pulse rate, arterial, and venous pressures, 380.
- SCOTT, E. L.** A study of a lecithin-glucose preparation, 145.
—. See LEE and SCOTT, 486.
—. See LEE, SCOTT and COLVIN, 474.
- Sea-anemones, muscular response in, 132.
- Sea-urchin eggs, effect of hypotonic sea-water on, 130.
—, permeability of, 249.
- SEFTON, W.** See FORBES, McINTOSH and SEFTON, 503.
- Serous cavities, absorption from, 75.
- SHAMOFF, V. N.** Concerning the action of various pituitary extracts on the isolated intestinal loop, 150.
—. On the secretory discharge of the pituitary body produced by stimulation of the superior cervical ganglion, 150.
- SHIPLEY, P. G. and R. S. CUNNINGHAM.** Studies on absorption from serous cavities. I. The omentum as a factor in absorption from the peritoneal cavity, 75.
- SIMPSON, S.** and A. T. RASMUSSEN. The effect of thyro-parathyroidectomy on the blood coagulation time in the dog, 148.
- SISCO, D. L.** See SCHNEIDER, CHELEY and Sisco, 380.
- Smooth muscle, of stomach, rhythmicity and tone in, 585.
- SNYDER, C. D.** A smooth-muscle nerve preparation, 150.
—. Is the contraction of smooth muscle accompanied by heat production? (Second communication), 138.
—. See FOLEY, COBLENTZ and SNYDER, 554.

- SPAETH, R. Evidence showing the metaphor to be a disguised type of smooth muscle, 144.
- SPENCER, W. H., G. P. MEYER, M. E. REHFUSS and P. B. HAWK. Direct evidence of duodenal regurgitation and its influence upon the chemistry and function of the normal human stomach, 141.
- Star-fish eggs, effect of mass-action on, 131.
- STEENBOCK, H., J. A. E. EYSTER and W. J. MEEK. Further researches on the relation of the chromotropic action of the vagus to the nodal tissues, 134.
- STERN, N. S. Factors affecting the coagulation time of blood. VIII. The influence of certain metals and the electric current, 186.
- STILES, P. G. See MARTIN and STILES, 136, 194.
- Stimulation, effect of rate of upon vasomotor mechanism, 136.
—, faradic, of floor of fourth ventricle, 141.
- Stomach, hunger contractions of in amphibia and reptilia, 140.
—, influence of cereal foods on secretion of, 150.
—, physiology of, 314.
—, psychic secretion of, 151.
—, regurgitation into, 141.
—, rhythmicity and tone in different parts of, 585.
—, secretion of with gastric and duodenal ulcers, 314.
- Sugar, appearance in digestive secretions, 142.
—, in secretions following phlorhizin, 418.
—, utilization of as nutriment, 143.
—of blood, effect of temperature and humidity on, 486.
- SUMMERS, W. S. See GREENE and SUMMERS, 146.
- Suprarenal feeding, effect of on white rat, 130.
- Suprarenin-yielding tissue, in different animals, 130.
- SWEET, J. E. See MURLIN and SWEET, 128.
- Sympathetic nervous system, overactivity of, 126.
- Systole, time relations of auricular, 133.
- T**EMPERATURE, effect of on work-in-g power of muscle and sugar of blood, 486.
- Thyroid, effect of on blood coagulation, 148.
- Tissue extracts, diuretic action of, 142.
- Tobacco, effect upon muscular work, 132.
- U**LCERS, gastric and duodenal, effect of on gastric secretion, 314.
- Ultra-violet radiation, destruction of hormones, pro-enzymes and enzymes by, 137, 426.
- Uric acid, content of in blood, 126.
- V**AGUS, chromotropic action of in relation to nodal tissue, 134.
—, stimulation of in heart block, 267.
- Valsalva experiments, effect of on blood pressure, 139.
- Valve, auriculo-ventricular contractility of muscle of, 150.
- Valves, mitral, movements of, 134.
—, movements of auriculo-ventricular, in relation to cardiac cycle, 206.
- Vasomotor irritability, effect of gland extracts on, 360.
— mechanisms, response to different rates of stimulation, 136.
— nerves, to bone marrow, 514.
— reflex arcs, 571.
— summations, 136, 194.
- Ventricle, localization in by faradic stimulation, 141.
—, movements of mitral valves in relation to systole of, 134.
- VOEGTLIN, C. Food accessories, 126.
—. See Koch and VOEGTLIN, 144.

- WADDELL, J. A. See HOUGH and WADDELL, 136.
- WAKEMAN, A. J. See OSBORNE, MENDEL, FERRY and WAKEMAN, 16.
- WEED, L. H. See MULLER and WEED, 373.
- WHEELON, H. See BEIFELD, WHEELON and LOVELETTE, 360.
- WHIPPLE, G. H. and C. W. HOOPER. Bile pigment metabolism. II. Bile pigment output influenced by diet, 349.
—. See HOOPER and WHIPPLE, 332.
- WIGGERS, C. J. The physiology of the mammalian auricle. I. The auricular myogram and auricular systole, 218.
- WIGGERS, C. J. The time relations of auricular systole, 133.
- WILLIAMS, H. B. Note on protection of string galvanometer circuits against external electrical disturbances, 230.
- WOODYATT, R. T. Prolonged uniform intravenous injections (Lantern), 137.
- X-RAYS, effect on cancer immunity, 128.





THE
AMERICAN JOURNAL
OF
PHYSIOLOGY

VOLUME XL

BALTIMORE, MD.
1916



CONTENTS

No. 1. MARCH 1, 1916

	PAGE
THE SALIVARY FACTOR AND ITS RELATION TO DENTAL CARIES AND IMMUNITY IN DEMENTIA PRAECOX AND EPILEPSY. <i>By John Albert Marshall</i>	1
THE EFFECTS OF THE SUBCUTANEOUS INJECTION OF ORGAN EXTRACTS UPON THE FLOW OF PANCREATIC SECRETION. <i>By John Rogers, M.D., Jesse M. Rahe, M.A., George G. Fawcett, M.D., George S. Hackett, A.B.</i>	12
ACCELERATION OF GROWTH AFTER RETARDATION. <i>By Thomas B. Osborne and Lafayette B. Mendel, with the cooperation of Edna L. Ferry and Alfred J. Wakeman</i>	16
EVIDENCE THAT THE ACTIVE PRINCIPLE OF THE RETROPERITONEAL CHROMA- PHIL TISSUE HAS THE SAME PHYSIOLOGICAL ACTION AS THE ACTIVE PRIN- CIPLE OF THE SUPRARENAL GLANDS. <i>By M. E. Fulk and J. J. R. Macleod</i>	21
THE REACTIONS OF STRIATED MUSCLE TO POTASSIUM CHLORIDE SOLUTIONS. <i>By Edward B. Meigs and W. G. Atwood</i>	30
THE INFLUENCE OF AGE UPON THE VENOUS BLOOD PRESSURE IN MAN. <i>By D. R. Hooker</i>	43
THE CHIEF PHYSICAL MECHANISMS CONCERNED IN CLINICAL METHODS OF MEASURING BLOOD PRESSURE. <i>By Clyde Brooks and Arno B. Luckhardt</i>	49
STUDIES ON ABSORPTION FROM SEROUS CAVITIES. I. THE OMENTUM AS A FACTOR IN ABSORPTION FROM THE PERITONEAL CAVITY. <i>By P. G. Shipley and R. S. Cunningham</i>	75
STUDIES IN BLOOD PRESSURE ESTIMATION BY INDIRECT METHODS. II. THE MECHANISM OF THE COMPRESSION SOUNDS OF KOROTKOFF. <i>By Joseph Erlanger</i>	82
PROCEEDINGS OF THE AMERICAN PHYSIOLOGICAL SOCIETY. TWENTY-EIGHTH ANNUAL MEETING.....	126

No. 2. APRIL 1, 1916

THE EFFECT OF CASTRATION ON THE WEIGHT OF THE PITUITARY BODY AND OTHER GLANDS OF INTERNAL SECRETION IN THE RABBIT. <i>By A. E. Livingston</i>	153
FACTORS AFFECTING THE COAGULATION TIME OF BLOOD. VIII. THE INFLU- ENCE OF CERTAIN METALS AND THE ELECTRIC CURRENT. <i>By N. S. Stern</i>	186
VASOMOTOR SUMMATIONS. <i>By E. G. Martin and P. G. Stiles</i>	194
THE MOVEMENTS OF THE MITRAL CUSPS IN RELATION TO THE CARDIAC CYCLE. <i>By Archie L. Dean, Jr</i>	206
THE PHYSIOLOGY OF THE MAMMALIAN AURICLE. I. THE AURICULAR MYO- GRAM AND AURICULAR SYSTOLE. <i>Carl J. Wiggers</i>	218

	PAGE
NOTE ON PROTECTION OF STRING GALVANOMETER CIRCUITS AGAINST EXTERNAL ELECTRICAL DISTURBANCES. <i>By Horatio B. Williams</i>	230
ON THE ACTION OF CERTAIN SUBSTANCES ON OXYGEN CONSUMPTION. I. THE ACTION OF POTASSIUM CYANIDE. <i>By L. H. Hyman</i>	238
INCREASE OF PERMEABILITY TO WATER FOLLOWING NORMAL AND ARTIFICIAL ACTIVATION IN SEA-URCHIN EGGS. <i>By Ralph S. Lillie</i>	249
CARDIODYNAMICS IN HEART BLOCK AS AFFECTED BY AURICULAR SYSTOLE, AURICULAR FIBRILLATION AND STIMULATION ON THE VAGUS NERVE. <i>By Robert A. Gesell</i>	267
CONTRIBUTIONS TO THE PHYSIOLOGY OF THE STOMACH. XXXIII. THE SECRETION OF GASTRIC JUICE IN CASES OF GASTRIC AND DUODENAL ULCERS. <i>By L. L. J. Hardt</i>	314
BILE PIGMENT METABOLISM. I. BILE PIGMENT OUTPUT AND DIET STUDIES. <i>By C. W. Hooper, and G. H. Whipple</i>	332
BILE PIGMENT METABOLISM. II. BILE PIGMENT OUTPUT INFLUENCED BY DIET. <i>By G. H. Whipple and C. W. Hooper</i>	349
THE INFLUENCE OF HYPOTENSIVE GLAND EXTRACTS ON VASOMOTOR IRRITABILITY. <i>By Arthur F. Beifeld, Homer Wheelon and C. R. Lovelette</i> ... THE ORIGIN OF THE ANTIBODIES OF THE LYMPH. <i>By Frank C. Becht and Arno B. Luckhardt</i>	360 366

NO. 3. MAY 1, 1916

NOTES ON THE FALLING REFLEX OF CATS. <i>By Henry R. Muller and Lewis H. Weed</i>	373
THE CIRCULATION OF THE BLOOD IN MAN AT HIGH ALTITUDES. III. THE EFFECTS OF PHYSICAL EXERTION ON THE PULSE RATE, ARTERIAL, AND VENOUS PRESSURES. <i>By Edward C. Schneider, assisted by Glen E. Cheley and Dwight L. Sisco</i>	380
THE APPEARANCE OF SUGAR IN THE SECRETIONS OF THE DIGESTIVE TRACT FOLLOWING THE ADMINISTRATION OF PHLORHIZIN. <i>By R. G. Pearce</i>	418
THE DESTRUCTION OF HORMONES, PROENZYMES AND ENZYMES BY ULTRA-VIOLET RADIATION. <i>By W. E. Burge, W. R. Fischer, and A. J. Neill</i>	426
A NOTE ON THE EXCITATION OF THE PHRENIC NERVE BY THE ACTION CURRENT OF THE HEART. <i>By F. H. Pike</i>	433
THE CHARACTER OF THE INNERVATION OF THE KIDNEY. <i>By Russell Burton-Otitz</i>	437
SOME OF THE GENERAL PHYSIOLOGICAL PROPERTIES OF DIAPHRAGM MUSCLE AS COMPARED WITH CERTAIN OTHER MAMMALIAN MUSCLES. <i>By Frederic S. Lee, A. E. Guenther, and Henry E. Meleney</i>	446
SOME OF THE CHEMICAL PROPERTIES OF CERTAIN MAMMALIAN MUSCLES. <i>By Frederic S. Lee, Ernest L. Scott and W. P. Colvin</i>	474
THE REACTION OF TEMPERATURE AND HUMIDITY ON THE WORKING POWER OF MUSCLES AND ON THE SUGAR OF THE BLOOD. <i>By Frederic S. Lee and Ernest L. Scott</i>	486

CONTENTS

V

No. 4. JUNE 1, 1916

	PAGE
THE EFFECT OF ETHER ANAESTHESIA ON THE ELECTRICAL ACTIVITY OF NERVE. <i>By A. Forbes, R. McIntosh and W. Sefton</i>	503
A METHOD FOR MAINTAINING AN ARTIFICIAL CIRCULATION THROUGH THE TIBIA OF THE DOG, WITH A DEMONSTRATION OF THE VASOMOTOR CONTROL OF THE MARROW VESSELS. <i>By Cecil K. Drinker and Katherine R. Drinker</i>	514
BLOOD PRESSURE IN HAEMORRHAGE AND ITS RESTORATION. <i>By Ardrey W. Downs</i>	522
STRUCTURE OF THE FIBRIN-GEL AND THEORIES OF GEL-FORMATION. <i>By W. H. Howell</i>	526
THE TENSION OF CARBON DIOXIDE AND THE PERCENTAGE SATURATION OF THE HAEMOGLOBIN IN THE VENOUS BLOOD AT REST AND AT WORK—THE REGULATION OF THE CIRCULATION RATE. <i>By Walter M. Boothby and Irene Sandiford</i>	547
ON THE DETERMINATION OF CHARACTER AND QUANTITY OF THE RESPIRATORY CHANGE OF ARTERIAL PRESSURE IN MAN BY MEANS OF THE KOROTKOFF SOUNDS. <i>By F. E. B. Foley, R. G. Coblenz and C. D. Snyder</i>	554
THE CONDUCTION OF PAINFUL AFFERENT IMPULSES IN THE SPINAL NERVES—STUDIES IN VASOMOTOR REFLEX ARCS. II. <i>By S. W. Ranson and P. R. Billingsley</i>	571
IV. DIFFERENCES IN RHYTHMicity AND TONE IN DIFFERENT PARTS OF THE WALL OF THE STOMACH. <i>By Walter C. Alvarez</i>	585
INDEX	603